THE *ALOEIDES THYRA* COMPLEX (LEPIDOPTERA : LYCAENIDAE)

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THE *ALOEIDES THYRA* COMPLEX (LEPIDOPTERA : LYCAENIDAE)

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SYNOPSIS

The complex which has hitherto been treated as *Aloeides thyra* (Linn.) is revised. Twelve new species and four new subspecies are described, and a key to the species is included.

INTRODUCTION

It has long been realized that the insects referred to as *Aloeides thyra*, which are to be found widely spread over the greater portion of southern Africa, do in fact include a complexity of closely related species and forms, differing widely in facies, but exhibiting only minor indeterminate characters in the male genitalia. The *A. thyra* group consists, with the exception of some examples of *simplex*, of species in which the median spots on the underside of the hind wing are conjoined, and form an irregular transverse fascia. In the species of *Aloeides* not under discussion, the median series consists of more or less separated spots. As absolute finality on the status and relationships of the various taxa cannot be attained at this stage, it is felt that recognizable taxa which are believed to be good species are best treated as species until their true affinities can be more decisively ascertained as further evidence becomes available. The late Mr. Gowan Clark made careful study of the early stages of some of the taxa, and has left us his precisely executed drawings (Plates 6–8); these drawings taken in conjunction with other data do suggest specific differentiation and indicate a line for further study. Trimen, in dealing with *thyra* (1866 : 273 and 1887 : 195), mentioned in some detail certain ' variations ' which can now be assigned to taxa described in this work. It is fortunate that, as Trimen pointed out, the original description of *thyra* is sufficiently precise to place the name beyond doubt to the insect from the Cape Town area, having darkened veins on the upperside of the wings.

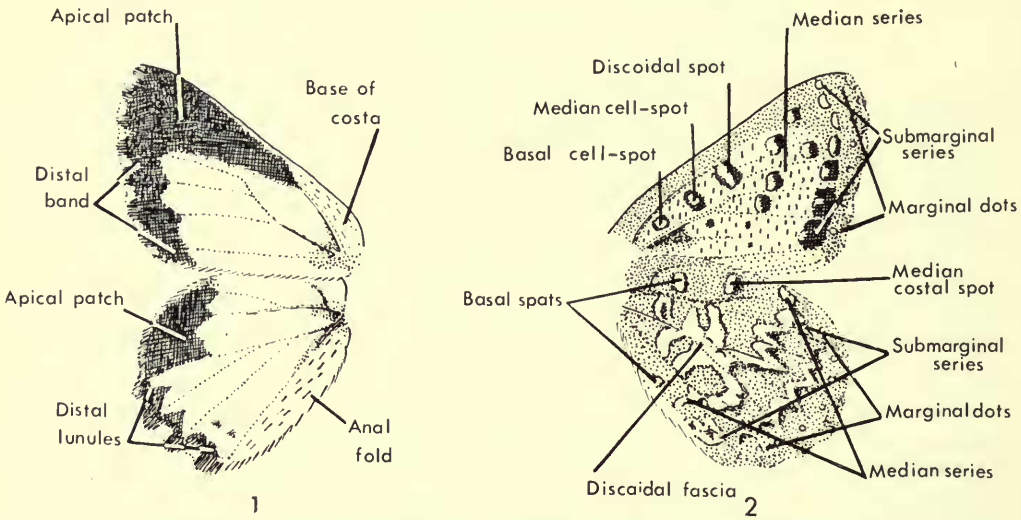
Evidence to support the specific separation of many of the taxa in the complex can be deduced from the fact that there is a considerable overlapping of their habitats, and that in many cases taxa do occur in the same area—sometimes even flying together—without any loss of identity. One thus concludes that interbreeding does not take place. Some instances of this are: *thyra* and *egerides* (Red Hill, Simonstown); *thyra* and *pallida grandis* (Du Toit's Kloof, and French Hoek); *thyra* and *lutescens* (Brand Vlei area); *thyra* and *vansoni vansoni* (Matjesfontein).

This paper is founded on the study of some 550 specimens in the collections of the Transvaal Museum, Pretoria, Mr. C. D. Quickelberge of East London, and the British Museum (Natural History). The word (Type!) after a reference indicates that the type has been examined and is in the collection of the B.M. (N.H.). In the case of citations of types, and detailed lists of paratypes, the present whereabouts of the specimens is indicated by the following abbreviations: (B.M.) =

British Museum (Natural History); (Tr.M.) = Transvaal Museum; (Q.) = Collection of Mr. Quickelberge; (Penn.) = that of Mr. Pennington.

Fore wing measurements are given for all species; they represent the distance between the base and apex of the wing. It should be remembered that these figures serve only as a guide to the approximate size of normal individuals, and do not in themselves constitute any definite means of identification.

The wing-pattern of all members of the complex is basically the same, only differing in a minor degree in the various taxa. Throughout this work, the names given to the wing characters in Text-figs. 1 and 2 are used, and to avoid repetition



FIGS. 1–2. The Wing Pattern in the *Aloeides thyra* Complex. (diagrammatic) : 1, upperside; 2, underside.

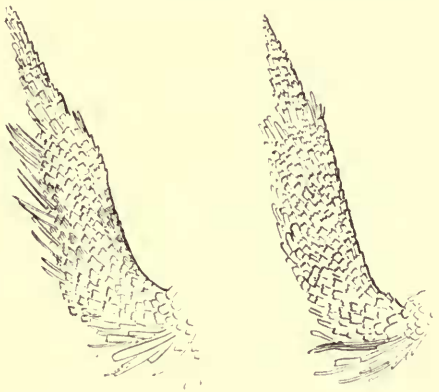
only significant characters are referred to in the descriptions. A general description of the taxa under consideration, in both sexes, can be summarized as follows.

Upperside. The fore wing is tawny orange, heavily margined by the black distal band and apical patch; the latter usually extending basad along the costa and fusing with an ochreous stripe arising from the base. Hind wing, tawny orange with a blackish apical patch, and a connected series of distal lunules in areas 1, 2, and 3; the anal fold is ochreous. In some taxa, the apical patch and distal band take the form of a continuous even and regular band, in which case they are referred to as the marginal bands.

Underside. Tawny orange on the fore wing, margined by a wide continuous costal and distal marginal band, varying individually in colour from pale fuscous, through various shades of brown and red-brown to crimson lake. There are three usually white-centred black spots in the cell, the basal, median and discoidal spots. The two last named are frequently double pupilled. Then follows a median series of up to seven black spots, usually bordered inwardly with white, the spot in area 4 being placed well distad, and that in 5 slightly basad. A submarginal series consists of similar spots that are graduated in size, those in areas 1 to 3 being very large, the remainder diminishing in size as they approach the apex, and often appearing wholly white. A series of interneural white dots before the margin is present in certain species. The hind wing is variably coloured as in the border of the fore wing, the markings, though

sometimes obscure, being usually lighter than the ground, often greyish or silver, and sometimes edged with black. They consist of four or more basal spots, a round spot in the centre of area 7, an irregular discoidal fascia composed of conjoined spots and sometimes fused with the median series and one of the basal spots, a very irregular sinuate median series, a series of submarginal lunules, and a marginal series of white dots. The last named is not always present as in the fore wing.

Palpi. These organs are heavily covered with rather broad scales, mostly having 3 to 5 teeth along their distal margin, but those scales on the ventral portion of the second segment have a smooth distal margin. In certain species, longer ribbon-like scales occur, scattered among the normal ones, but mostly arising from a longitudinal area to the outward side of the



FIGS. 3–4. Labial palpi: 3, *A. penningtoni;* 4, *A. natalensis.*

ventral portion. This character is of value in the identification of species, but care must be observed in its use as in museum specimens a few cases do occur in which the long scales have apparently become detached or broken off.

Early stages. The larvae of the group are always associated with ants, but being vegetable feeders, are not fully dependent upon them. In all known instances, the food-plant has proved to be a species of *Aspalathus* (Leguminosae).

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The authors wish to express their thanks and appreciation to the following: The authorities of the Transvaal Museum, Pretoria, in particular the late Dr. G. van Son; Mr. K. M. Pennington of Balgowan, Natal; Mr. C. D. Quickelberge of East London, Cape Province; Mr. W. H. Henning of Johannesburg; Mr. N. A. Brauer of Queenstown.

ALOEIDES Hübner

Aloeides Hübner, 1819 : 73.
Aloeides Hübner; Scudder, 1875 : 107.
Aloeides Hübner; Aurivillius in Seitz, 1924 : 424.

Aurivillius quoted this name for his second group of the genus *Phasis;* his statement that the palpi are without bristly hairs is not true in all cases, but in all other

respects his diagnosis is correct. The type of the genus was fixed by Scudder as *pierus*, a species closely allied to *thyra*.

Key to the Species

1 Upperside all wings, veins darkened throughout their length by dusky scaling. Hind wing, costa in males and most females widely black
thyra p. 373 (Pl. 1, figs. 5–10, 15–20)

– Upperside all wings, veins not darkened throughout their length by dusky scaling. Hind wing, costa in both sexes not widely black 2

2 Upperside all wings, veins not darkened or only partially so. Fore wings, distal band wide, more than 3 mm. at vein 3
pallida p. 374 (Pl. 1, figs. 11–14, 21–24, Pl. 2, figs. 25, 26, 28, 29, 35, 36, 38, 39)

– Upperside all wings, veins not darkened. Fore wings, distal band narrow, less than 3 mm. at vein 3 3

3 Fore wing broad, distal band usually narrow. Hind wing, apical patch never more than a slight thickening of the dark margin 4

– Fore wing narrow, distal band moderately wide. Hind wing, apical patch always obvious, often forming a quadrate or triangular patch 7

4 Fore wing, apex not acute. Hind wing underside: the median and submarginal series heavily margined distally with black, which contrasts with the deep crimson —in some individuals rich brown—ground colour, giving the wing a distinctive and decorative appearance 5

– Fore wing apex acute. Hind wing underside: the median and submarginal series not heavily margined with black, and the wing is of a less decorative appearance 6

5 Hind wing underside, varying from rich brown to deep crimson
dentatis p. 376 (Pl. 2, figs. 31–34, 41–44)

– Hind wing underside, varying from pale brown to pink
braueri p. 376 (Pl. 2, figs. 27, 30, 37, 40)

6 Upperside, dark margins usually narrow. Fore wing, apical patch does not (or does only vestigially) extend inwards along the costa
simplex p. 377 (Pl. 3, figs. 45–47, 56–58)

– Upperside, dark margins wide. Fore wing, apical patch does extend inwards along the costa . . . . . ***vansoni*** p. 378 (Pl. 3, figs. 48–51, 59–62)

7 Fringes on all wings unspotted, fuscous with a faint golden sheen in certain lights. Fore wings: dark margins of approximately even width, not expanded to form a triangular patch at the apex . . . ***dryas*** p. 379 (Pl. 5, figs. 91–92, 104–105)

– Fringes on all wings spotted. Fore wings: dark margins often of uneven width, always expanded to form a triangular patch at the apex 8

8 Palpi, in both sexes, with long ribbon-like scales present along their ventral surface. Hind wing underside: the median series irregular, with sharp projections distally 9

– Palpi, in both sexes, with ribbon-like scales absent, or if present quite short, projecting only slightly beyond the normal ones. 10

9 Fore wing upperside, the distal band noticeably decreases in width as it approaches the anal angle . . . . ***penningtoni*** p. 380 (Pl. 5, figs. 101–102, 114–115)

– Fore wing upperside, the distal band does not noticeably decrease in width as it approaches the anal angle . . ***natalensis*** p. 380 (Pl. 5, figs. 93–94, 106–107)

10 Palpi with short ribbon-like scales 11

– Palpi without any ribbon-like scales 12

11 All wings, margins wide (more than 3 mm. at vein 3 fw.) and intensely black
quickelbergei p. 381 (Pl. 3, figs. 54–55, 65–66)

– All wings, margins narrow (approximately 2 mm. at vein 3 fw.) and dingy brown-black . . . . . ***oreas*** p. 382 (Pl. 5, figs. 99, 103, 112, 116)

12 Hind wing underside, median series smoothly sinuate, never with sharp projections 13
– Hind wing underside, median series irregular, with sharp projections . . . 16
13 Fore wing underside, submarginal series of black spots accompanied distally by a series of whitish lunules . . ***clarki*** p. 382 (Pl. 4, figs. 77, 78, 89, 90)
– Fore wing underside, submarginal series of black spots not accompanied distally by a series of whitish lunules 14
14 Hind wing underside, brown or red-brown ***depicta*** p. 383 (Pl. 3, figs. 52–53, 63–64, Pl. 5, figs. 100, 113)
– Hind wing underside, grey or very pale brown (straw colour) 15
15 Hind wing underside, some shade of grey often laved with yellow ***arida*** p. 384 (Pl. 4, figs. 71–73, 75–76, 83–85, 87–88, Pl. 5 figs 97–98, 110–111)
– Hind wing underside, pale brown, almost straw colour. ***lutescens*** p. 385 (Pl. 4, figs. 67–68, 79–80)
16 Hind wing underside, the median series below vein 5 and the basal spots (5 or 6 in number) are silver-white and very conspicuous ***egerides*** p. 385 (Pl. 5, figs. 95–96, 108–109)
– Hind wing underside, the median series partly obsolete and mainly represented by a broad fascia extending across the bases of areas 1 to 4, basal spots prominent but not more than 4 in number . . ***margaretae*** p. 386 (Pl. 4, figs. 70, 74, 82, 86)

Aloeides thyra (Linnaeus)

(Pl. 1, figs. 5–10, 15–20)

Papilio thyra Linn., 1764 : 329, Cape of Good Hope.
Papilio thyra Linn.; Linn., 1767 : 789, Cape of Good Hope.
Papilio nycetus Stoll (in Cramer), 1781 : 178, pl. 380, figs. F & G. Cape of Good Hope.
Papilio evadrus Fabricius, 1787 : 89, Cape of Good Hope.
Aloeides thyra (Linn.) Hübner, 1825 : pl. 88.
Phasis thyra (Linn.) Aurivillius (in Seitz) 1924 : pl. 70 g.

Length of fore wings: ♂ 12–16 mm.; ♀ 13·5–18 mm.

Some amplification of the characters mentioned in the key is desirable. In both sexes, the dark scaling on the wing veins is indeed variable, examples occurring in which the scaling is so extensive that it spreads outwards from the veins over the tawny orange ground, and in one example is so predominant that the tawny orange ground is only present in area 1 and as a small fragment in area 2. Other examples exist in which the vein scaling (though present) is so narrowly restricted that it is not easily apparent. On the hind wing, the apical patch is widely black, covering much of the cell, area 5, and in all but a few examples (females), extending along the costa to the base. Underside, the ground colour varies individually from pale brown, through brown, red-brown to deep pink, and red; the markings on the hind wing are usually quite prominent, and of a whitish grey or leaden colour. The white marginal dots are not present.

The short series from Matjesfontein (3 ♂, 6 ♀) may possibly represent a local form or minor race. The fore wings are rather more pointed, the veins only scantily darkened, and with one exception the fore wings exhibit a clear white centre to the discoidal spot on the upper surface. Without further evidence it is not deemed desirable to name this form.

Flying from September (occasionally August) to April, the species is to be found in the Cape Peninsula, and in the more westerly parts of Cape Province. It occupies a wide variety of habitats, and is to be found close to the sea as well as on hills and mountains, being somewhat localized in its occurrence. Specimens examined are from: Cape Town; Muizenberg Mt.; Wynberg Hill; Newlands; Lion's Head; Table Mountain; Blinkwater Ravine; Simon's Town; Strandfontein, False Bay; Cape Point; Mamre; Llandudno; Clanwilliam; De Wet; Gydo Mt.; Saldanha Bay; Milnerton; Retreat; Stellenbosch; Matjesfontein.

Aloeides pallida (Riley) **stat. n.**

The separation of this species is justified by the fact that the subspecies *pallida grandis* inhabits some part of the territory of *thyra;* it occurs at high or fairly high altitudes, in some cases in actual contact with it, but has a much shorter emergence period, only appearing on the wing during the months of October, November and December. A single example was once taken in mid-January. Mr. Pennington holds the opinion that the species forms a cline, developing progressively eastwards away from the winter rainfall area of the Cape. With every respect to Mr. Pennington, the series under examination, though individually variable, can be divided into three subspecies to the satisfaction of both authors, and this course is therefore adopted. Long ribbon-like scales are present on the palpi, they do not project far beyond the normal scales. The white marginal dots on the underside of the hind wing are normally present.

A. pallida pallida (Riley) **stat. n.**

(Pl. 2, figs. 28–29, 38–39 Pl. 7 figs. 14–17)

Phasis thyra f. *pallida* Riley, 1938 : 283, pl. 1, fig. 9, pl. 2, fig. 34, Steyneberg [*sic*] recte Steynsburg. (Type!)
Aloeides thyra f. *pallida* (Riley) Peters, 1952 : 110.

Length of fore wing: ♂ 15–19 mm.; ♀ 17–22 mm.

Readily identifiable by its large size and pallid aspect in both sexes. The upperside is of a decidedly paler tawny orange than is that of *thyra;* the dark margins are very variable in both shape and width, especially on the hind wing, where the apical patch is large, and in most examples extends as far as vein 4, in others reaching vein 5; whereas in the type it merges gradually into the discal lunules without definite demarcation. On the under side, all wings exhibit a pale, rather washed out appearance. The three spots of the submarginal series in areas 1, 2 and 3 of the fore wing are clearly defined, and not surrounded by an area of dusky scaling.

This race occurs mainly in the eastern parts of Cape Province and in the Orange Free State; the series studied are from: Cape Province: Steynsburg; Annshaw (probably in the Albany district); Grahamstown; Port Elizabeth; Uitenhage; Witteklip; Mossel Bay; Naauwpoort; Willowmore; Matjesfontein; Bergerville Road; 10 ♂, 17 ♀. Orange Free State: Reddersburg, 1 ♂, 1 ♀.

Aloeides pallida grandis ssp. n.

(Pl. 1, figs. 11–14, 21–24)

Length of fore wing: ♂ 16–19 mm.; ♀ 20–23 mm.

♂ ♀ Upperside. The tawny orange areas are deeper in colour than are those of the nominate race, the margins being wide and intensely black. The apical patch on the fore wing extends inward along the costa to about two-thirds of its length. On the hind wing the apical patch is large, and often extends below vein 4. Some individuals exhibit a definite black discoidal spot. Underside. In the types, the marginal area of the fore wing is of a medium olive-brown, but this colour varies greatly through the series, some examples occurring in which these areas are a beautiful deep red. On the fore wing, the three spots of the submarginal series in areas 1, 2, and 3 are surrounded by a roughly triangular clouding of dusky scales.

This, the largest and most striking member of the complex occurs in restricted localities in the mountain ranges in the south-west of Cape Province.

Holotype ♂. CAPE PROVINCE: Du Toit's Kloof, 23.xi.1965 (*C. G. C. Dickson*), B.M. Type No. Rh. 18556.

Allotype ♀. As holotype, B.M. Type No. Rh. 18557.

Paratypes. CAPE PROVINCE: as holotype, 1 ♂, 2 ♀ (B.M.); French Hoek Pass, xi.1950 (*A. J. Duke*), 1 ♂ (B.M.); French Hoek Mountains, 19.xi.1949 (*A. J. Duke*), 1 ♂, 2 ♀ (Tr.M.); Garcia Forestry, xi.1940, and '41 (*G. van Son*), 3 ♂, 1 ♀ (Tr.M.); Garcia's Pass, xi.1946 (ex T. H. E. Jackson coll.), 1 ♂ (B.M.); Garcia Pass, 1,800 ft., 28.xi.1938 (*R. C. Wood*), 1 ♀ (B.M.); Top of Bain's Kloof, 25.x.1941 (*G. van Son*), 1 ♂, 2 ♀ (Tr.M.); Grootvadersbos, 1–8.xi.1940 (*G. van Son*), 2 ♂, 3 ♀ (Tr.M.); Jonkersberg, xi.1940 (*G. van Son*), 1 ♀ (Tr.M.).

A. pallida littoralis ssp. n.

(Pl. 2, figs. 25–26, 35–36)

Zeritis thyra (Linn.), Hewitson, 1852 : pl. 76, fig. 9.
Zeritis thyra (Linn.), Trimen, 1887 : pl. 9, fig. 5.

Length of fore wing; ♂ 14–17 mm.- ♀ 20–23 mm.

♂ ♀. Similar to *P. grandis*, but differs in the following characters: on the upperside of the fore wing, the inner edge of the distal band is distinctly concave in between the veins in interspaces 1, 2, and 3; the veins are usually rather more heavily scaled. On the hind wing the apical patch extends further towards the base, closely approaching the discoidal spot, which is present in all the specimens examined.
The underside is like that of *P. grandis*.

Closely affined to *P. grandis*, and as far as is known represents the species in the southwest Cape Coastal area at presumably lower altitudes.

Holotype ♂. CAPE PROVINCE: Knysna (ex Trimen), B.M. Type No. Rh. 18558.

Allotype ♀. CAPE PROVINCE: Knysna, 21.xii.1965 (*N. A. Brauer*), B.M. Type No. Rh. 18559.

Paratypes. Cape Province: Sour Flats, Knysna, 22–24.xi.1954 (*L. Vari*), 1 ♂, 2 ♀ (Tr.M.); Knysna, 5.xi.1965 (*C. D. Quickelberge*), 1 ♂, 1 ♀ (Q.); Knysna, 18.xi.1932, 1 ♂ (Tr.M.); Knysna (ex Trimen), 2 ♂, 1 ♀ (B.M.); Knysna (ex Felder), 1 ♂, 2 ♀ (B.M.); Still Bay, 9–12.xi.1940 (*G. van Son*), 1 ♂ (Tr.M.).

Aloeides dentatis (Swierstra)

A. dentatis dentatis (Swierstra) **stat. n.**

(Pl. 2, figs. 31–32, 41–42)

Phasis dentatis Swierstra, 1909 : 177, Waterval Onder, Transvaal.
Phasis thyra dentatis Swierstra; Riley, 1938 : 239.

Length of fore wing: ♂ 13–14 mm.; ♀ 14–16·5 mm.

The distinctive pattern on the underside of the hind wing renders this species easily identifiable; the black-edged, whitish grey markings stand out sharply on the brown to deep crimson ground, giving the wing a most decorative appearance. The discoidal fascia tends to be broken up into separate spots. On all wings, the marginal dots are present. The palpi are without ribbon-like scales.

In a letter, Mr. Henning states that the Witpoortjie colony is restricted to a small area—about the size of a football ground—situated in flat country, and quite away from the neighbouring ridges on which other *Aloeides* species occur; they are on the wing from October to April, flying up to 5 p.m. He is of the opinion that the earlier specimens (October to January) have brighter, more reddish undersides than the later examples, and that individuals with a really brown underside are comparatively rare.

Examples studied from Transvaal: Johannesburg; Witpoortjie; Pretoria; 15 ♂, 10 ♀.

A. dentatis maseruna (Riley) **comb. n.**

(Pl. 2, figs. 33–34, 43–44)

Phasis thyra maseruna Riley, 1938 : 239, pl. 1, figs. 11–12, pl. 2, figs. 36–37, Maseru, Basutoland (Type!)

Very similar to the nominate subspecies in both sexes, only differing in the less intense black of the margins on the upperside, and the somewhat wider median and submarginal series on the hind wing underside.

Examples studied. Lesotho: Maseru, 2 ♂, 4 ♀.

Aloeides braueri **sp. n.**

(Pl. 2, figs. 27, 30, 37, 40)

Length of fore wings: ♂ 15–16 mm.; ♀ 17–18 mm.

♂ Upperside. On all wings, the colour is clear tawny orange, of a lighter shade than that of *thyra*. The distal band on the fore wings is of even width, 2·5 mm. approximately. The

apical patch is even narrower, barely extending below vein 6, and decreasing in width progressively as it approaches the buff area at the base of the costa. On the hind wing, the apical patch is reduced to a mere thickening of the distal band. The cilia on all wings are heavily checkered with white between the veins.

♂ Underside. The marginal dots are absent on all wings. On the fore wing, the spots of the median series are small, those in areas 2, and 3 especially so, and the double spot in area 1 vestigial or altogether missing. On the hind wing the colour varies individually from light dun-brown to a rather dull shade of sullied pink; the median and submarginal series are dull grey, of a tint that contrasts only feebly with the ground, and only the blackish distal edging of these markings renders them easily visible.

♀. Only differs from the male in the very slightly paler shade of tawny orange on the upperside.

The palpi are without ribbon-like scales.

Holotype ♂. CAPE PROVINCE: Bulhoek, Queenstown, 13.x.1962 (*N. A. Brauer*), B.M. Type No. Rh. 18560.

Allotype ♀. CAPE PROVINCE: Queenstown, xi.1960 (*N. A. Brauer*), B.M. Type No. Rh. 18561.

Paratypes. CAPE PROVINCE: as holotype, 2♂; Cathcart, 1961–63 (*C. D. Quickelberge*), 2 ♂, 1 ♀ (Q.). BASUTOLAND: Nsututse Pass, 8,000 ft., 2.i.1947 (*C. Jacot-Guillarmod*), 1 ♀ (Tr.M.).

Aloeides simplex (Trimen)

(Pl. 3, figs. 45–47, 56–58)

Zeritis simplex Trimen, 1893 : 136, Damaraland; Port Nolloth; Khama's Country to Mashunaland (Syntypes!)
Aloeides simplex (Trimen) Peters, 1952 : 109.

Length of fore wing: ♂ 13–17 mm.; ♀ 14–19mm.

The palpi are without ribbon-like scales; their ultimate segment is individually variable in length. Marginal dots are never present on the underside of all wings.

The insects herein referred to this species show considerable variation, and come from a wide area stretching from the coasts of Little Namaqualand and South West Africa to Botswanaland. Study of the exterior characters and the genitalia of both sexes has failed to reveal any evidence that more than one species is involved, or that any subspecies can be defined. Trimen described *simplex* from four examples, labelling all four ' type '. These specimens are now in the B.M. (N.H.) and do, as Trimen suggested, exhibit considerable differences. They are in fact syntypes, and in order to avoid possible confusion in the future, we hereby select the male labelled ' Damaraland, C. J. A.' as the LECTOTYPE in accordance with the International Code of Zoological Nomenclature, para. 74(a). The two examples labelled 'Durban, 1889, Millar ' (mentioned by Trimen) are in the B.M.; they are in fact referable to *A. penningtoni*.

A short series of both sexes from Kuruman agrees well with the lectotype; they are all of large size, tawny orange above with extremely narrow dark borders, and the ground colour of the hind wing underside is of a ferruginous sandy tint. In

contrast, a series from Aus and Namtib in South West Africa, though variable in size, do tend to be smaller; their dark borders are wider, in one female attaining a width of 3 mm. in area 3 of the fore wing. The underside of the hind wing is dusky brown. Specimens from Hondeklip Bay and Springbok are similar but their hind wing undersides are more greyish. The Trimen specimens from Port Nolloth and Khama's Country to Mashunaland are also of this form. Dr. van Son states that the large sandy form does occur together with the small one at Aus, and suggests that there is a slight possibility that two species are involved; he thinks it unlikely that they are seasonal or geographical forms.

Examples studied. BECHUANALAND: Kuruman; Niekerkshope. BOTSWANALAND: Khama's Country to Bechuanaland; N'kate, Marikari. NAMAQUALAND: Port Nolloth; Hondeklip Bay; Springbok; Soebatsfontein. SOUTH WEST AFRICA: Aus; Namtib; Damaraland; 24 ♂, 26 ♀.

Aloeides vansoni sp. n.

A. vansoni vansoni ssp. n.

(Pl. 3, figs. 49, 50, 60, 61)

Length of fore wing: ♂ 14–18 mm.; ♀ 15–19·5 mm.

♂ Upperside. The ground colour is tawny orange with a deeper, more reddish tinge than that of *simplex*. The margins are narrow, but variable in width, usually being wider than those of that species. On the fore wing, the apical patch is larger, and extends over half the length of the costa. On the hind wing a slight swelling of the narrow distal margin is all that remains of the apical patch, which never forms a quadrate spot as in *thyra*.

Underside. Dingy fuscous on the hind wing and margins of the fore wing. The hind wing pattern complete, but only appearing vaguely in shades of grey, very much as in *simplex* from Aus. On the fore wing, the fuscous apical portion extends inwards as far as the two spots of the median series situated in areas 4 and 5. In shape, the fore wing is remarkably pointed at the apex; this character—although individually variable—is sufficiently noticeable in all specimens to distinguish them from all other species in the complex.

♀. Like the male on both surfaces, except that on the underside fore wing the fuscous area at the apex does not in every case extend as far as the median spots in areas 4 and 5. The wings are broader and not noticeably more pointed than those of the same sex in other species of the complex.

♂ ♀. The labial palpi are without ribbon-like scales.

Holotype ♂. CAPE PROVINCE: Matjesfontein, 22–26.ix.1940 (*G. van Son*), (Tr.M.).

Allotype ♀. As holotype, 18.x.1954 (Tr.M.).

Paratypes. CAPE PROVINCE: as holotype, 1 ♂ (B.M.); as holotype, 20.x.1941, 1 ♀ (B.M.); as allotype, 2 ♂, 2 ♀ (Tr.M.); Bergerville Road, 11.x.1939 (*G. C. Clark*), 2 ♂, 3 ♀ (Tr.M.); Prince Albert Road, 19.x.1941 (*G. van Son*), 3 ♀ (Tr.M.); Nieuwveld Mtns., near Beaufort West, 4.x.1954 (*C. G. Dickson*), 1 ♂, 1 ♀ (B.M.); 10 miles S. of Beaufort West, 19.x.1941 (*G. van Son*), 1 ♀ (Tr.M.); Deelfontein, 16.ix.1902 (*Col. Sloggett*), 1 ♂ (B.M.).

A. vansoni juana ssp. n.

(Pl. 3, figs. 48, 51, 59, 62)

Length of fore wing: ♂ 16·5–18 mm.; ♀ 18 mm.

♂ Upperside. Only differs from that of the nominate race by the deeper and even more reddish tinge of the tawny ground, and by the wider and more intensely black margins. The underside is slightly darker, but is otherwise similar. In one example, all the fuscous areas are replaced by deep dusky pink.

Whereas the nominate subspecies inhabits the Karroo region, this montane race extends along the Swartberg range and is the southern representative of that species.

Holotype ♂. CAPE PROVINCE: Hills 3½ miles S. of Ladismith, 1.ix.1965 (*C. G. Dickson*), B.M. Type No. Rh. 18562.

Allotype ♀. CAPE PROVINCE: Willowmore, 15.x.1917 (*Dr. Brauns*), B.M. Type No. Rh. 18563.

Paratypes. CAPE PROVINCE: as holotype, 2 ♂ (B.M.); Seven Weeks Poort, 21.x.1954 (*G. van Son*), 2 ♂ (Tr.M.); West of Calitzdorp (Hill summits, Huis R. Pass), 2.ix.1965 (*C. G. Dickson*), 1 ♂ (B.M.); Uniondale, 14.iii.1940 (*G. van Son*), 1 ♀ (Tr.M.).

Aloeides dryas sp. n.

(Pl. 5, figs. 91, 92, 104, 105)

Length of fore wing: ♂ 15–18 mm.; ♀ 14–19 mm.

♂ Upperside. Deep tawny orange, the dark margins are narrow (approximately 2 mm. in area 3), and the apical patch takes the form of a stripe along the outer two-thirds of the costa; it is not noticeably widened at its junction with the distal band. On the hind wing, the distal lunules form a continuous narrow sinuate band, and the apical patch is irregular in shape, but never quadrate. ♀. As in the male.

♂ ♀ Underside. The fore wing margins and the hind wing are individually variable shades of red-brown. On the fore wing the distal margin is very narrow; so much so, that the spots of the submarginal series in areas 1, 2, 3, and 4 are placed well within the tawny orange portion, and quite clear of the marginal band. The median series is prominent, and in some examples includes two extra spots in area 1. On the hind wing, the markings are metallic, and are only faintly margined with black. The marginal dots on all wings are not evident.

The plain fringes, the characteristic restriction of the fore wing apical patch, and the presence of long ribbon-like scales, extending well beyond the tips of the normal scales, on the second segment of the labial palpi, serve easily to identify this species.

Dr. van Son (i. l.) says: ' This is undoubtedly a distinct species. It is confined to areas very close to the rain forests, or even within clearings in the rain forest, as in Malta, or above the Hanglip, Zoutpansberg. Lower Umfolosi River (Zululand) would seem a bit low, but it is a very moist area, so perhaps the labelling is correct.'

Holotype ♂. TRANSVAAL: Zoutpansberg, Shilouvane, 1906 (*H. A. Junod*), B.M. Type No. Rh. 18564.

Allotype ♀. As holotype, B.M. Type No. Rh. 18565.

Paratypes. TRANSVAAL: Mountain Inn, Zoutpansberg, iii.1941 (*G. & E. van Son*), 1 ♂ (Tr.M.); White Heather Mine, 14.ii.1938 (*G. van Son*), 1 ♂, 1 ♀ (Tr.M.); Malta, Pietersburg, 2.ii.1927 (*G. van Son*), 1 ♂ (Tr.M.); Above Hanglip Forest, L. Trichardt, 24.iv.1956 (*G. van Son*), 1 ♂ (Tr.M.); as holotype, 5 ♂, 1 ♀ (B.M.); Sheba Mine, Barberton, 11.x.1949 (*G. van Son*), 1 ♀ (Tr.M.). L. Trichard [*sic*], 1–15.i.1920 (*H. G. Breyer*), 1 ♀ (Tr.M.).; ZULULAND: Lower Umfolosi River, 1922 (*H. H. Curson*), 1 ♀ (B.M.).

Aloeides penningtoni sp. n.

(Pl. 5, figs. 101, 102, 114, 115)

Length of fore wing: ♂ 13–18mm.; ♀ 14–17 mm.

♂ Upperside differs from *dryas* by the distinctly triangular apical patch on the fore wing, and by its conspicuously checkered fringes. The fore wing distal band is variable; in many examples, its inner edge is convexly scalloped between the veins, whereas in others, this edge is almost straight; in all, the band decreases in width as it approaches the anal angle. On the hind wing, the apical patch is not quadrangular, but is quite extensive, covering half the length of the costa.

♀ Upperside like that of the male, but the dark margins are wider. The inner edge of the fore wing distal band is not noticeably scalloped in any of the specimens examined.

♂ ♀ Underside. The marginal dots on all wings are usually evident. The ground colour varies from warm brown to deep rich red colour, the hind wing markings being easily discernible, and leaden silver in colour.

Palpi, on the second segment, always with long ribbon-like scales projecting far beyond the normal ones, and always longer and more numerous than those of the somewhat similar *oreas*.

From the material available, the species appears to be widespread in Natal, and rare in the eastern parts of Cape Province; much more material (with full data) is needed before a complete account of its distribution can be compiled.

Holotype ♂. NATAL: Gillitts, Durban 1.xii.1921 (*Dr. L. G. Higgins*), B.M. Type No. Rh. 18566.

Allotype ♀. NATAL: without further details, B.M. Type No. Rh. 18567.

Paratypes. NATAL: Durban (Trimen Coll.) 3 ♂, 1 ♀ (B.M.); Port Natal (Felder Coll.), 1 ♂ (B.M.); Umkomaas, 19.i.1913, 1 ♂ (B.M.); Kastrolnek (*G. v. Dam*), 1 ♂, 2 ♀ (Tr.M.), 1 ♂ (B.M.); Estcourt, 26.x.1890, 1 ♂ (B.M.); Enselini, Zululand, 1 ♂ (B.M.). CAPE PROVINCE: Transkei (*Miss Barrett*), 2 ♂ (B.M.); Glenconnor, 9.viii.1936 (*G. C. Clark*), 1 ♂ (B.M.); Grahamstown, xii.1901, 1 ♂ (B.M.); Franklin, East Griqualand, 3.i.1938 (*K. M. Pennington*), 1 ♂ (Penn.).

Aloeides natalensis sp. n.

(Pl. 5, figs. 93, 94, 106, 107)

Length of fore wing: ♂ 13–16 mm.; ♀ 14–16·5 mm.

♂ Upperside deeper tawny orange than in *penningtoni*, the dark margins are wider, and on the fore wing the distal band does not decrease in width towards the anal angle. The hind

wing apical patch is more extensive, and in many examples, extends over more than half the length of the costa.

♀ similar to that of *penningtoni*, but the dark margins are wider.

♂ ♀ Underside as in *penningtoni*.

It is with some hesitation that this insect is described as a species; its many similarities to *penningtoni* might well suggest that it is a form of that species. In view however of the facts that the males at least are readily separable, and that the two do occur together in some areas, it is felt that the present treatment is most likely to call attention to the problem, and that others may be able to ascertain the truth of the matter.

Neither this nor the preceding species occurs in Durban itself today—or apparently in its immediate vicinity; *natalensis* has been taken in the Botha's Hill area in recent years.

Holotype ♂. NATAL: Muden, 9.xi.1949 (*H. Cookson*), B.M. Type No. Rh. 18568.

Allotype ♀. NATAL: Durban (ex Trimen coll.), B.M. Type No. Rh. 18569.

Paratypes. NATAL: Muden, i.1947–48 (*H. Cookson*), 5 ♂ (B.M.); Rosetta, 26.xi.1940 (*G. C. Clark*), 1 ♂ (Tr.M.); Balgowan, 6.xii.1947 (*K. M. Pennington*), 1 ♂ (Penn.); Yellowwoods, 27.xii.1965 (*K. M. Pennington*), 1 ♂ (Penn.); Durban, iv.1908 (*Miss M. Fountaine*), 1 ♂ (B.M.); Dargle, iv.1930 (ex T. H. E. Jackson coll.), 1 ♂ (B.M.); Newcastle, 27.viii.1893, 1 ♂ (B.M.); Karkloof, 1 ♂, 1 ♀ (B.M.); Ulundi, 12.ix.1896, 1 ♂ (B.M.); near Maritzburg, 2 ♂ (B.M.); Pinetown, 1 ♂ (B.M.); Vryheid (ex Trimen) 1 ♂, 1 ♀ (B.M.).

Aloeides quickelbergei sp. n.

(Pl. 3, figs. 54, 55, 65, 66)

Length of fore wing: ♂ 12·5–16 mm.; ♀ 16 mm.

♂ Upperside, deep tawny orange with heavy sooty black borders, the latter are even darker than those of *pallida grandis*. On the fore wing, the distal band is wider in area 1 than it is in areas 2 and 3, often attaining a width of 3·5 mm. The apical patch is large and triangular, and extends to the base of the costa, being brightened there by an admixture of tawny scales; its lower edge is almost straight, and runs from the base through the lower part of the cell, along the line of vein 4 (either touching or almost touching that vein) to the distal margin. On the hind wing, the apical patch is large and roughly quadrangular; it is cut squarely off at about a third the length of the costa, its lower edge being sharply terminated half-way between veins 4 and 5. The fringes are unicoloured grey-black in many examples, others exhibit a faint white checkering between the veins; often the individual checkering is represented by just one or two white cilia.

Underside, the ground colour is dingy brown, or in some examples dingy red-brown. On the hind wing, the discoidal fascia and median series are greyish, edged with black, but rather obscure; the submarginal series is scarcely evident, and the marginal dots are absent. The palpi contain a few short ribbon-like scales.

The dark margins, generally darker appearance, and average larger size serve to distinguish this from the somewhat similar *A. depicta;* its rather limited range suggests that it may prove to be a race of that species, replacing it at higher altitudes in the more southern parts of Cape Province. No indication of altitude is given on the data labels, but Mr. Quickelberge states that it flies at 3–4,000 ft.

Holotype ♂. Cape Province: Robinson Pass, 30.xii.1965 (*N. A. Brauer*), B.M. Type No. Rh. 18570.

Allotype ♀. As holotype, B.M. Type No. Rh. 18571.

Paratypes. Cape Province: as holotype, 1 ♂ (B.M.); Outeniqua Pass, 23.xii. 1963 (*C. D. Quickelberge*), 2 ♂, (Q.); Garcia Forestry, 16.ix.1941 (*G. van Son*), 1 ♂ (Tr.M.); Grootvadersbos, 1–6.xi.1940 (*G. van Son*), 2 ♂ (Tr.M.); Jonkersberg, xi. 1940 (*G. van Son*), 3 ♂, 1 ♀ (Tr.M.); N.E. of Knysna, 24.xi.1965 (*Mrs. K. M. Wykeham*), 1 ♂ (B.M.); Still Bay, 8–12.xi.1940 (*G. van Son*), 1 ♂ (Tr.M.); Montagu Pass, 19.xii.1963 (*C. D. Quickelberge*), 1 ♂, 1 ♀ (Q).

Aloeides oreas sp. n.

(Pl. 5, figs. 99, 103, 112, 116)

Length of fore wing: ♂ 13–14 mm.; ♀ 14–15 mm.

♂ Upperside, the fore wings are shorter in proportion than those of *penningtoni* and *natalensis*, the dark margins being like those of the latter species. The apical patch on the hind wing contrasts with both by being cut off squarely at approximately one third the length of the costa. The fringes are but feebly checkered with white.

Underside, the colour of the hind wing is red-brown, the markings grey outlined with blackish, and only moderately distinct. The most definite distinguishing feature is the conformation of the median series, which takes the form of a serpentine band, its outer edge smoothly rounded, in distinct contrast to its really jagged counterpart in the species mentioned above. All wings are entirely without marginal white dots.

♀. Apart from the longer wings, this sex is similar to the male.

The palpi in both sexes possess only a few, not very obvious ribbon-like scales that hardly protrude above the normal ones.

Holotype ♂. Natal: Loteni, 7,500 ft, 29.xi.1945 (*K. M. Pennington*), B.M. Type No. Rh. 18572.

Allotype ♀. Natal: Giant's Castle, 8.x.1933 (*K. M. Pennington*), B.M. Type No. Rh. 18573.

Paratypes. Natal: Giant's Castle, 4.x.1934 (*K. M. Pennington*), 1 ♂ (B.M.); Giant's Castle, x.1933 (ex T. H. E. Jackson coll.), 1 ♀ (B.M.); Niginya, Ulundi, 6,000 ft., ix.1896 (*G. A. K. Marshall*), 3 ♂ (B.M.); Ulundi, 14.ix.1896 (ex Adams coll.), 1 ♂ (B.M.). Cape Province: Steynsburg, x.1933 (ex T. H. E. Jackson coll.), 2 ♂ (B.M.); Mt. Kubusie, Stutterheim, 7.x.1962 (*C. D. Quickelberge*), 3 ♂, 1 ♀ (Q.); Dohne Peak, Stutterheim, 15.x.1963 (*C. D. Quickelberge*), 1 ♀ (Q.); Outeniqua Mts., xi.1936 (*R. C. Wood*), 1 ♂ (B.M.); Hankey, v.1939 (ex T. H. E. Jackson coll.), 1 ♂ (B.M.).

Aloeides clarki sp. n.

(Pl. 4, figs. 77, 78, 89, 90; Pl. 7, figs. 1–13)

Length of fore wing: ♂ 13 mm.; ♀ 13·5 mm.

♂ Upperside, slightly smaller, but otherwise very similar to that surface in *oreas*.

Underside fore wing, the distal margin is grey-brown; the submarginal series consists of six black spots, the two nearest the apex being each accompanied inwardly by a white spot; then

follows distally a series of six white spots, which are followed in turn by a marginal series of black spots, containing near their distal edges the white marginal dots. All this, together with the strongly black and white checkered fringe gives a neat and pleasing pattern, more precise than any to be seen in *oreas* or other allied species. On the grey-brown hind wing, the whitish grey, black-edged markings are also comparatively precise; the four basal spots are distinct and rounded; the discoidal fascia is broken up into separate spots, a rounded one in the centre of the cell, an elongate spot or bar at the cell-end, a rounded spot in area 1, and an irregular smear in the anal fold. The median series is sinuate and continuous, it does not coalesce with the discoidal fascia. The submarginal series consists of blackish lunules, for the most part surrounded vaguely by whitish grey; these lunules enclose obscure brownish spots, with vague black centres, the latter being closely accompanied by the marginal white dots.

The late Mr. Gowan Clark expressed a wish that this insect should bear the above name as a tribute to his son Mr. Douglas G. Clark, who captured the first specimen in the type locality during Easter, 1963, which gave clear evidence of the butterfly's distinctive nature.

Holotype ♂. CAPE PROVINCE: Aloes-Coega Flats, 11.iv.1963 (*G. C. Clark*), B.M. Type No. Rh. 18574.

Allotype ♀. As holotype, 18.iv.1963, B.M. Type No. Rh. 18575.

Paratypes. CAPE PROVINCE: as allotype, 1 ♀ (B.M.), Coega, 10.iv.1938 (*G. C. Clark*), 1 ♀ (Tr.M.).

Aloeides depicta sp. n.

A. depicta depicta ssp. n.

(Pl. 3, figs. 52, 53, 63, 64; Pl. 8, figs. 1–24)

Length of fore wing: ♂ 14–17 mm.; ♀ 14–17 mm.

♂ Upperside, similar to that of *oreas*, but the insect is on the average larger, and the fringes are more distinctly checkered. The fore wing is more pointed, and the anal angle of the hind wing is produced to a blunt point, the distal margin between it and vein 4 being in most examples slightly concave.

Underside, similar to that of *oreas*, but the hind wing in the majority of specimens is dull brown, without any trace of red. The markings are rather less regular, not quite so smoothly sinuate as in *oreas*, but never really jagged as in *penningtoni*.

♀. The wings are broader, the hind wing anal angle not produced, but in other respects like the male.

Palpi never with ribbon-like scales.

Holotype ♂. CAPE PROVINCE: Uitvlugt, B.M. Type No. Rh. 18576.

Allotype ♀. CAPE PROVINCE: Uitvlugt, B.M. Type No. Rh. 18577.

Paratypes. CAPE PROVINCE: Matjesfontein, ix.x.1940–41 (*G. van Son*), 1 ♂, 1 ♀ (Tr.M.); Matjesfontein, 25–30.x.1928 (*R. E. Turner*), 1 ♂ (B.M.); Prince Albert Road, ix.x.1941 (*G. van Son*), 2 ♀ (Tr.M.); Swartberg Pass, 9.x.1965 (*C. D. Quickelberge*), 1 ♂ (Q); Seven Weeks Poort, x–xi.1941 (*G. van Son*), 2 ♂, 1 ♀ (Tr.M.); Knysna, 18.xi.1932 (*G. C. Clark*), 1 ♂, 1 ♀ (Tr.M.); Knysna, 1 ♂, 1 ♀ (B.M.); Port Elizabeth, 28.x.1932 (*G. C. Clark*), 1 ♂, 3 ♀ (Tr.M.); Eagles Crag, N.E. of Port Elizabeth, 15.xi.1934 (*G. C. Clark*), 1 ♂, 2 ♀ (B.M.); Coega, 15.x.1939 (*G. C. Clark*),

1 ♀ (Tr.M.); Groendal, nr. Uitenhage, 15.x.1950 (*A. J. Duke*), 1 ♂ (B.M.); Uniondale, 14.iii.1940 (*G. van Son*), 1 ♀ (TrM.); Cradock, x.1960 (*G. C. Clark*), 1 ♂ (B.M.); Naude's Pass, 22.iii.1940 (*G. van Son*), 2 ♂, 2 ♀ (Tr.M.); Burghersdorp, xi.1947 (ex T. H. E. Jackson coll.), 1 ♂ (B.M.); Glenconnor, 9.ix.1936, 1 ♂ (B.M.); Camdeboo Mts, above Palmietfontein, 16.iii.1965 (*C. G. Dickson*), 1 ♂, 1 ♀ (B.M.); Uitvlugt, 3 ♂, 2 ♀ (B.M.).

A. depicta apicalis ssp. n.

(Pl. 5, figs. 100, 113)

Length of fore wing: ♂ 16–17 mm.; ♀ 17·5 mm.

♂. Differs from the nominate race in that the fore wing apex is decidedly more pointed; the distal margin is slightly concave; the hind wing distal margin below vein 4 is usually markedly concave, and the anal angle even more produced. On the upperside the margins are very broad—quite as broad—but not so intensely black as those of *quickelbergi*. On the underside, the colour is sandy brown, considerably paler in tone than in any example of the nominate subspecies.

This appears to be restricted to Little Namaqualand and the adjacent more western parts of Cape Province.

Holotype ♂. Cape Province: O'okiep, Little Namaqualand (Trimen Coll.), B.M. Type No. Rh. 18578.

Paratypes. Cape Province: Kamiesberg, 5.i.1967 (*K. M. Pennington*), 1 ♂ (Penn.); Top of Eland's Kloof, Citrusdal, 2.x.1940 (*G. van Son*), 2 ♂ (Tr.M.); Clanwilliam, x.1950, 1 ♂ (B.M.); Farm Swartberg, Piquetberg Road, 8.xi.1948 (*G. van Son*), 1 ♂, 1 ♀ (Tr.M.).

Aloeides arida sp. n.

(Pl. 4, figs. 71–73, 75, 76, 83–85, 87, 88; Pl. 5, figs. 97, 98, 110, 111)

Length of fore wing: ♂ 13–16 mm.; ♀ 15·5–18 mm.

♂. The fore wing apex is pointed, but less so than that of *apicalis;* the distal margin is convex. On the upperside, the dark marginal bands are as in *apicalis*, but rather narrower, and of a less intense black. The fore wing apical patch in one or two examples is almost bisected by a finger of tawny orange ground colour, which, though interrupted at the veins, almost reaches to the costa. On the underside, the hind wing is grey, in most cases laved with golden yellow or occasionally reddish orange to a variable extent. The basal spots and the median series are pale leaden grey, and are arranged in a similar manner to those of *depicta;* their outer edges are defined by black. Dusky submarginal lunules are usually obvious, those in areas 1 to 4 being often accompanied inwardly by bright golden yellow lunules.

♀. Apart from the shape of the wings, similar to the male.

This is a most variable species, and further collecting may yet produce evidence that more than one species is involved. A male and female from Lange Valley to the south-east of Lambert's Bay have wide dark margins and a somewhat paler tawny orange ground colour. The underside of the hind wing in the male is blackish grey.

Holotype ♂. Cape Province: Garies, 1,800 ft., 21.xi.1938 (*R. C. Wood*), B.M. Type No. Rh. 18579.

Paratypes. Cape Province: as holotype, 1 ♂ (B.M.); Springbok, viii.1952 (*Lt.-Col. H. C. Bridges*), 3 ♂ (B.M.); Springbok (*G. van Son*), 3 ♂ (Tr.M.); 6 miles east of Springbok, 25.ix.1962 (*C. G. Dickson*), 1 ♂ (B.M.); between Koekenaap and Nieuwerust, 4.ix.1966 (*C. G. Dickson*), 1 ♂ (B.M.); Het Kruis, Piquetberg Div., 29.xii.1966 (*C. G. Dickson*), 1 ♂ (B.M.); O'okiep, 12.xii.1948 (*G. van Son*), 1 ♂ (Tr.M.); O'okiep (Trimen Coll.), 2 ♂ (B.M.); Strandfontein, W. Coast, 8.ix.1964 (*K. M. Pennington*), 1 ♂, 1 ♀ (Penn.); near Clanwilliam, x.1950 (*N. A. Brauer*), 2 ♂, 3 ♀ (B.M.); Van Rhyn's Pass (*G. van Son*), 2 ♂ (Tr.M.); Gydo Pass, 1.xi.1965 (*C. D. Quickelberge*), 1 ♀ (Q.); Lange Valley, S.E. of Lambert's Bay, 18.ix.1963 (*C. G. Dickson*), 1 ♂, 1 ♀ (B.M.); Hondeklip, 11.xi.1933 (*G. van Son*), 1 ♀ (Tr.M.).

Aloeides lutescens sp. n.

(Pl. 4, figs. 67, 68, 79, 80)

Length of fore wing: ♂ 13–14 mm.; ♀ 14·5 mm.

♂ Upperside, quite as pale a shade of tawny orange as that of *pallida pallida;* the margins are as in *depicta*, but definitely more narrow, and not so intensely black as those of *depicta apicalis*. The basal third of the costa is strongly scaled with yellow-buff. All the fringes are heavily checkered with white.

Underside, the orange area of the fore wing is pale yellowish orange, which only feebly contrasts with the straw-coloured costal and distal margins; the spotting is small and neat. The hind wing is of the same straw colour, the markings being dull silver, outlined with black in part; they are usually not very clearly defined. White marginal dots are present on all wings.

At present this insect is known only from Brand Vlei near Worcester; its distinctive appearance makes it appear probable that it represents a good species, and that it is not a race of one of the other members of the group. It has been found on sandy ground at the base of the hills, examples being met with from early summer to the middle of April.

Holotype ♂. Cape Province: Below De Wets Berg, Brand Vlei, 3.i.1964 (*C. G. Dickson*), B.M. Type No. Rh. 18580.

Allotype ♀. As holotype, B.M. Type No. Rh. 18581.

Paratypes. As holotype, 1 ♂ (B.M.); Brand Vlei, near Worcester, 21.i.1965 (*C. G. Dickson*), 6 ♂ (B.M.).

Aloeides egerides (Riley) stat. n.

(Pl. 5, figs. 95, 96, 108, 109)

Phasis thyra f. *egerides* Riley, 1938 : 238, pl.1. fig. 10, pl. 2, fig. 35, Simon's Town. (Type!)

Length of fore wing: ♂ 13 mm.; ♀ 14 mm.

♂ Upperside, differs from *lutescens* only by the apical patch of the hind wing being extended to a point nearly half-way along the costa. Underside, the hind wing is usually some shade of red; the conspicuous well separated silver-white markings make this an easy species to identify.

♀. This sex shows the usual difference in wing shape; it is in other respects similar to the male.

A local species, but in addition to the type locality, it has been found near Melkbosch Strand at Lambert's Bay, in the Mamre District, and on Piquetberg Mtn.

Examples studied. CAPE PROVINCE: Red Hill, Simon's Town (including types); Piquetberg; Lambert's Bay.

Aloeides margaretae sp. n.

(Pl. 4, figs. 70, 74, 82, 86)

Length of fore wing: ♂ 14–15 mm.; ♀ 15 mm.

♂ Upperside, in general appearance like *depicta depicta*, but the distal edge of the fore wing is almost completely straight, that of the hind wing being concave and the anal angle produced as in *depicta apicalis*. On the fore wing, the colour is clear bright tawny orange, of much the same tint as that of *egerides;* the apical patch, and distal band are clear-cut, but variable in width, the distal band varying between 2 and 3 mm. at its narrowest point (vein 3). On the hind wing, the apical patch is large and quadrate, but reaches only to one third the length of the costa. The fringes are distinctly checkered.

Underside, apart from the tawny orange area on the fore wing, the ground is usually dusky salmon-pink with an even smooth appearance, examples do occur with a more brownish tone. On the fore wing, the submarginal spots in areas 1 to 3 are black and rounded, that in area 1 being the largest; those from area 4 to the apex are either obsolete, or only faintly indicated by tiny whitish dots, each accompanied by a vague darkening of the ground. On the hind wing, the basal spots are small, but white and very distinct; there is a tiny but similar median costal spot in area 7, a larger one in the middle of the cell, followed by an irregular bar at the cell-end. The median series is represented by a straight, soiled white or grey stripe extending across the wing from below the cell in area 1 to vein 5, with indications of a separate spot above that vein; the median spots in areas above vein 6 are absent. A pale blur in areas 3 and 4, and a whitish anal spot are the only indications of the submarginal series.

♀. There is the usual sexual difference in the wing-shape. On the underside of hind wing, the median series is sharply angled at vein 5, turning back towards the base of the wing, terminating at vein 6. Otherwise, the sexes are similar.

This species is named, with pleasure, after Mrs. K. Margaret Wykeham who captured a number of specimens when collecting butterflies to the south of Lambert's Bay on the 4th and 5th of September 1966. It is one of a number of interesting and rare Lycaenidae which she has secured over a period of many years.

Holotype ♂. CAPE PROVINCE: South of Lambert's Bay, 5.ix.1966 (*C. G. Dickson*), B.M. Type No. Rh. 18582.

Allotype ♀. CAPE PROVINCE: Spion Kop, 15 miles S.E. of Lambert's Bay, 5.ix.1966 (*C. G. Dickson*), B.M. Type No. Rh. 18583.

Paratypes. CAPE PROVINCE: Piquetberg Mtn., 22.iii.1957 (*C. G. Dickson*), 1 ♂ (B.M.); as holotype, 1 ♂, 1 ♀.

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ADDENDUM

Subsequent to going to press, study of the detailed and careful drawings of the late Mr. Gowan Clark revealed that the species described below has been misidentified as *A. clarki*. These drawings are reproduced on Plates 6, 7, and 8.

Aloeides gowani sp. n.

(Pl. 4, figs. 69, 81; Pl. 6, figs. 1–21)

Length of fore wing: ♂ 14 mm.; ♀ 14–15mm.

Both sexes are very similar to *clarki*. On the fore wing underside, the intricate submarginal pattern as described in *clarki* is present, but it is by no means so neat or distinct. The same surface of the hind wing is of a paler, more loam-brown colour, the pattern being far less obvious, and less precise.

It is unfortunate that Gowan Clark's only larva of *clarki* died before attaining the fifth instar, but sufficient details were recorded (Pl. 7) to confirm the separation of *gowani* from that species; the most noticeable character being the great contrast in size and pattern of the reticulations on the surface of the eggshell.

Holotype ♂. CAPE PROVINCE: Naauwpoort (*G. C. Clark*). B.M. Type No. Rh. 17011.

Allotype ♀. As holotype, B.M. Type No. Rh. 17012.

Paratypes. As holotype, 1 ♂, 1 ♀ (B.M.); Sheldon, 6.xii.1932 (*G. C. Clark*) 2 ♂, 3 ♀ (Tr.M.); Sheldon, xi.1940 (*G. C. Clark*) 2 ♀ (B.M.); Burghersdorp, 5.i.1967 (*Mrs. R. Southey*) 1 ♀ (B.M.); Burghersdorp, xi.1947 (ex T. H. E. Jackson coll.) 1 ♂ (B.M.); Kendrew, 21.iii.1940 (*G. van Son*) 1 ♀ (Tr.M.); Molteno, 5.xi.1961 (*N. A. Brauer*) 1 ♂.

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(Synonyms are shown in *italics*)